

Practitioner's Docket No. RVSI-020

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: JOHN MERVA, ET AL

Application No.: 09/927,187

Group No.: 2876

Filed : 08/10/2001

Examiner: SEUNG H. Lee

For: Apparatus and Process For Simultaneously Handling A Plurality Of Symbology Encoded Articles

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TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION--37 C.F.R. 41.37(a)(1))

1. Transmitted herewith is the APPEAL BRIEF in this application with respect to the Notice of Appeal filed on October 29, 2004.
2. STATUS OF APPLICANT

This application is on behalf of a small entity. A statement was already filed.

05/03/2005 MAHME1 00000060 09927187

02 FC:2254

795.00 DP

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Date: April 29, 2005

Morris I. Pollack, Reg. No. 20,270

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** Only the date of filing (' 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under ' 1.8 continues to be taken into account in determining timeliness. See ' 1.703(f). Consider "Express Mail Post Office to Addressee" (' 1.10) or facsimile transmission (' 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.*

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. § 41.20(b)(2), the fee for filing the Appeal Brief is:

small entity \$250.00

Appeal Brief fee due \$250.00

4. EXTENSION OF TERM

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

Applicant petitions for an extension of time under 37 C.F.R. § 1.136 (fees: 37 C.F.R. § 1.17(a)(1)-(5)) for four months:

Fee: \$795.00

If an additional extension of time is required, please consider this a petition therefor.

5. TOTAL FEE DUE

The total fee due is:

Appeal brief fee \$250.00

Extension fee (if any) \$795.00

TOTAL FEE DUE \$1,045.00

6. FEE PAYMENT

Attached is an RVSI* check Number 17844 in the amount of \$1,045.00.

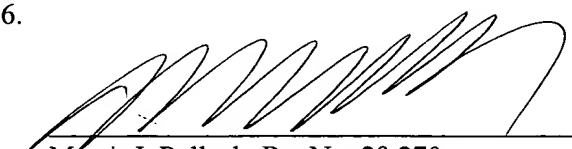
[* RVSI is the owner, by Assignment, of all right in and to this patent application]

A duplicate of this transmittal is attached.

7. FEE DEFICIENCY

If any additional extension and/or fee is required, and if any additional fee for claims is required, charge Deposit Account No. 502966.

Date: April 29, 2005


Morris I. Pollack, Re. No. 20,270



Practioner's Docket No. RVSI-020

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of :MERVA, ET AL

Application Serial No. :09/927,187

Art Unit :2876

Filed :08/10/2001

Examiner :SEUNG H. Lee

For :APPARATUS AND PROCESS FOR SIMULTANEOUSLY HANDLING A
PLURALITY OF SYMBOLOGY ENCODED ARTICLES

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' APPEAL BRIEF (37 C.F.R. section 41.37)

This Brief is in furtherance of the Notice of Appeal filed in this case on October 29, 2004.

The fees required under Section 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefor are dealt with in the accompanying Transmittal of Appeal Brief.

This Brief is transmitted in accordance with 37 C. F. R. section 41.37 (a) (1).

CERTIFICATE OF MAILING/TRANSMISSION [37 C.F.R. 1.8(a)]

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Date April 29, 2005



Signature

Morris I. Pollack, Reg. No. 20,270
(Name of person signing)

This brief contains these items under the following headings and in the order set forth below [37 C. F. R. section 41.37(c)(1)]:

- I. REAL PARTY IN INTEREST
 - II. RELATED APPEALS AND INTERFERENCES
 - III. STATUS OF CLAIMS
 - IV. STATUS OF AMENDMENTS
 - V. SUMMARY OF CLAIMED SUBJECT MATTER
 - VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL
 - VII. ARGUMENTS
 - VIII. CLAIM APPENDIX
- The final page of this brief bears the practioner's signature.

I REAL PARTY IN INTEREST [37 CFR 41.37(c)(1)(i)]

The real party in interest in this Appeal is:

_____ the party named in the caption of this Brief.

XXX the following party

Robotic Vision Systems, Inc.

II RELATED APPEALS AND INTERFERENCES [37 CFR 41.37(c)(1)(ii)]

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this Appeal:

XXX there are no such appeals or interferences.

_____ there are as follows:

III. STATUS OF CLAIMS [37 CFR 41.37(c)(1)(iii)]

The status of the claims in this application are:

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are:

Claims 1-24

B. STATUS OF ALL THE CLAIMS

1. Claims canceled: NONE
2. Claims Withdrawn from consideration but not canceled: NONE
3. Claims pending: 1-24:
4. Claims allowed :NONE
5. Claims rejected: 1-24

C. CLAIMS ON APPEAL

The claims on appeal are:

Claims 1-24

IV. STATUS OF AMENDMENTS [37 CFR 41.37(c)(1)(iv)]

 No amendments have been filed in the instant application subsequent to the FINAL Rejection of June 29, 2004.

V. SUMMARY OF CLAIMED SUBJECT MATTER [37 CFR 41.37(c)(1)(v)]

The invention involved in the subject matter of the claims on Appeal is directed to an encoded symbology scanner 20 (page 7, line 20 & (FIGS. 1 & 2), and scanning process (as described beginning at line 20 of page 15 and continuing to line 13 of page 17), for simultaneously scanning encoded symbology 38 (page 8, line 10 and FIGS. 2 & 12) disposed on a number of articles 32, such as test tube vials 32 (page 8, line 4) which, in turn, may be disposed in a rack 30 (page 8, line 3) in an array 34 (page 8, line 6).

Scanner 20 includes a housing 22 (page 7, line 23 and FIGS. 1 & 2) within which there is disposed: an illumination assembly 180 (page 14, line 1 and FIGS. 8 & 9) and a number of cameras, in this instance four cameras 80, 82, 84 & 86 (page 9, line 15 and FIGS. 4-9). A window 60 (page 8, line 22 and FIGS. 4-7) is disposed on top of housing 22..

Encoded symbology 38 is carried by its respective article 32, (such as a test tube vial and the like), on an under or bottom surface 36 (FIGS. 2 and 3) thereof.. In this instance such encoded symbology 38 is the conventionally available "DATA MATRIX" type. Each such encoded symbology may merely encode an identification, such as a number or the like, peculiar to the respective article 32. Encoded symbology 38 may also include other information such as the characteristics of the substance in the respective vial 32, or to be

thereinafter placed in each respective vial 32. Encoded symbology 38 may be applied to each vial 32 by conventionally available equipment and systems to do so, as by printing, etching or the like.

Camera assemblies 80 (page 9, line 15 and FIGS. 8 and 9), 82, 84 and 86 are of the CCD type and are respectively disposed within housing 22. Cameras 80 - 86 may be of conventional construction. Camera printed circuit boards 102, 104 (page 9, line 22 and FIG. 8), provided to each camera 80, 82, 84 and 86 respectively, function for each respective camera in a conventional manner to operate same (page 10, line 1) and facilitate operation thereof and connect the respective cameras to control circuitry (page 10, line 2) for and otherwise with respect to encoded symbology reader assembly 24.

Each camera 80, 82, 84 and 86 is positioned for optimum and efficient capture of encoded symbology 38 (page 12, line 10) carried by articles 32 when properly positioned and disposed on window 60 so that each captures a particular area (page 13, line 7) of the underside of array 34 of articles 32. More particularly camera assemblies (80-86) are so positioned so that each camera captures at least one quarter of the encoded symbology 38 carried by articles 32 of array 34 (page 13, line 9).

An illumination assembly 180 (page 14, line 1 and FIGS. 8 and 9) is provided for scanner 20. and includes printed circuit board 190, 192 (page 14, line 10 and FIG. 9) each of which carries and positions a number of red, 636 nm LED's 210 (page 14, line 11 and FIG. 8) and is selected to provide non-diffused, low angle, "dark field" illumination. LED's 210 are

arranged horizontally but may be angled upward toward and under window 60.

A rack 30 of articles 32 (page 15 line 22 and FIG 11), such as vials 32 each carrying encoded symbology 38, such as a Data Matrix, is placed on window 60. Illumination assembly 180 is energized for an allotted time, which could be strobbing, and assemblies 80-86 are activated each to image one quarter of the array of the encoded symbology 38 carried by vials 32. The images may overlap a predetermined amount to facilitate proper image capture. The images are respectively decoded and a data array corresponding to the number of encoded articles, (in this instance 96), is made available for output.

The encoded symbology may be used to identify each article as it is recorded in a data base so that different procedures for different articles may be performed via a data base lookup. The encoded symbology as provided and utilized as herein above described insures that regardless of the position in the array, rack, carrier or the like, of the article (vial 32) that the procedure information (test data) that is recorded for the respective article will be properly associated with that article. The particular procedure to be performed for any particular array may also be encoded in the encoded symbology so that a data base lookup is not required.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

[37 CFR 41.37©(1)(vi)]

A. Whether claims 1, 6, 7, 12, 14, 18, 19, 21, 22, and 24 are unpatentable, under 35 U.S.C. 103(a), over Li et al (US 5,504,319) in view of Stoffel (US 5,168,766).

B. Whether claims 2, 8 and 14 are unpatentable, under 35 U.S.C. 103(a), over Li et al as modified by Stoffel (as applied by the Examiner to claims 1,7 and 13) and further in view of Oizumi et al (US 5,770,848).

C. Whether claims 3-5, 9-11, 15-17, 20 and 23 are unpatentable, under 35 U.S.C. 103(a), over Li et al as modified by Stoffel and Oizumi and further in view of Gusmano (US 5,532,845).

VIII. ARGUMENTS

Claims 1, 6, 7, 12, 14, 18, 19, 21, 22, and 24 are patentable, over Li et al (US 5,504,319) in view of Stoffel (US 5,168,766).

Independent claim 1 is directed to an encoded symbology scanner for scanning encoded symbology on a number of articles and that includes imaging means that simultaneously images all the encoded symbology from all of a number of articles and illumination means disposed to simultaneously illuminate all the encoded symbology carried by all articles.

Independent claim 7 is directed to an encoded symbology scanner for scanning encoded symbology on a number of articles and that includes that the imaging device simultaneously images all the encoded symbology from all of a number of articles and that an illumination assembly is disposed to simultaneously illuminate all the encoded symbology carried by all articles.

Independent process claim 13 is directed to a process for scanning encoded symbology on a number of articles and that includes simultaneously imaging all the encoded symbology from all of a number of articles and simultaneously illuminating all the encoded symbology carried by all articles.

The reference to Li et al (US 5,504,319), contrary to the Examiner's comments, can only image the bar coded symbology of a single article at a time. Figure 2 of Li shows linear bar codes 122, 124 and 126 in a single image 102 (FIG 2, see column 3 beginning at line 34) captured by a single DSP 112 from a single article (package 118 or 119 –FIG 1) (FIG 2, see column 3 beginning at line 34)

The low resolution scanner of Li et al determines the location and orientation of the bar code(s) on a single article and thereafter the high resolution scanner of Li et al scans the bar code(s) on that same article as detected by the low resolution scanner for decoding

(see column 2 beginning at line 60). Thus it is unquestionably clear that Li et al does and can only scan the bar code(s) on a single article at a time; and in fact requires two scans of the bar code(s) on the single article to effect decoding of the bar code(s).

There is no teaching, showing or suggestion in Li et al of imaging a number of symbology encoded articles simultaneously as claimed.

The Examiner recognizes "...that Li fails to particularly teach that the barcodes are attached to a number of articles." And in the FINAL Office Action, for the first time, cites and applies Stoffel (US 5,168, 766). Stoffel, however, also does not teach, show or suggest simultaneously illuminating or simultaneously imaging encoded symbology from a number of symbology encoded articles .

Li et al does not show, teach or suggest any illumination means, device or step of a process as alluded to by the Examiner.

Independent claim 19 is directed to an encoded symbology scanner for scanning encoded symbology on a number of articles and that includes imaging means that simultaneously images all the encoded symbology from all of a number of articles.

Independent process claim 22 is directed to a process for scanning encoded symbology on a number of articles and that includes simultaneously imaging all the encoded symbology from all of a number of articles.

As set out in detail above with respect to claims 1, 7 and 13 neither Li et al or Stoffel show, teach or suggest simultaneously imaging encoded symbology from a number of articles, each of which carries encoded symbology.

Accordingly claims 1,7,13, 19 and 22 (all the independent claims) patentably define over Li et al and Stoffel taken either singly or in combination.

Dependent claims 6, 12, 14, 18, 21, and 24 depend, either directly or indirectly, from independent claims 1, 7, 13, 19 and 22 respectively and patentably distinguish over Li et al in view of Stoffel for the reasons set out above.

More importantly these claims include additional subject matter which further distinguishes them over Li et al as well as over Li et al in view of Stoffel. All of these claims include that the articles are test tubes or vials disposed in a predetermined array in a rack. Neither Li et al or Stoffel teach, show or suggest articles in the form of test tubes disposed in a predetermined array in a rack Nor do any of the other references of record, and as such, it

would not be obvious for one of ordinary skill in the art to provide “an improved and an enhanced system for decoding a plurality of barcodes attached on the each test-tube” as alluded to by the Examiner. Li et al and Stoffel image and decode the barcodes on an article one article at a time.

The only teaching of encoded test tubes in a predetermined array in a rack is in Applicants' specification and claims and such are not available for rejection of the claims.

Accordingly claims 6, 12, 14, 18, 21 and 24 patentably define over Li et al and Stoffel taken either singly or in combination.

Dependent claims 2, 8, and 14 depend, either directly or indirectly, from independent claims 1, 7, and 13 respectively and patentably distinguish over Li et al in view of Stoffel and further in view of Oizumi (US 5,770,848) for the reasons set out above.

More importantly these claims include additional subject matter which further distinguishes them over Li et al in view of Stoffel and Oizumi. Oizumi only reads the encoding of one article at a time and does so with a highly complex scanner. Oizumi's support means only receives one article at a time and images only one article at a time and not the number of articles as claimed. Oizumi thus does not show, disclose or even suggest any combination

at all of the scanner nevertheless one over which these claims would be unpatentable.

Accordingly claims 2, 8 and 14 patentably define over Li et al and Stoffel in view of Oizumi taken either singly or in combination.

Dependent claims 3-5, 9-11, 15-17, 20 and 23 depend, either directly or indirectly, from independent claims 1, 7, 13, 19 and 22 respectively and patentably distinguish over Li et al in view of Stoffel, Oizumi and further in view of Gusmano (US 5,532,845) for the reasons set out above.

More importantly these claims include additional subject matter which further distinguishes them over the four applied references.

Claims 3, 9, and 15 include that each CCD captures encoded symbology from only a portion of the received number of articles and that the decoder functions to assemble the decoded symbology into a stream of decoded data; while claims 4, 10, 16, 20, and 23 add that there are four CCD cameras each of which being disposed to capture encoded symbology from a quarter of the articles so positioned; and claims 5, 11, and 17 further including that the encoded symbology is different for each article.

Gusmano only teaches and shows using multiple CCD's to image a single document, one document at a time; and not to simultaneously image multiple articles each with different encoded symbology as claimed. Thus the only thing obvious is that there is no disclosure, teaching or suggestion of any combination of these references nevertheless one over which these claims would be unpatentable.

It appears that the Examiner has selected bits and pieces of prior art from 4 references and has kludged them together to fabricate a scanner and scanner process that could only be done in view of Applicants' disclosure and such is not available to the Examiner for that purpose.

Accordingly claims 3-5, 9-11, 15-17, 20 and 23 patentably define over Li et al and Stoffel in view of Oizumi and further in view of Gusmano, taken either singly or in combination.

FOR THE ABOVE REASONS CLAIMS 1-24 PATENTABLY DISTINGUISH OVER THE ART APPLIED THEREAGAINST, TAKEN EITHER SINGLY OR IN COMBINATION; ACCORDINGLY, THE EXAMINER'S REJECTION SHOULD BE REVERSED, THE CLAIMS ALLOWED AND THE APPLICATION PASSED TO ISSUE AND SUCH IS COURTEOUSLY SOLICITED.

VIII. CLAIM APPENDIX

The text of the claims on Appeal are:

1. An encoded symbology scanner for scanning the encoded symbology on a number of articles each of which carries encoded symbology , comprising:

(a) support means for the symbology scanner for receiving a number of articles upon which symbology has been encoded;

(b) illumination means disposed to simultaneously illuminate all of the encoded symbology carried by all articles that are so received by said support means;

(c) imaging means disposed to simultaneously image all of the encoded symbology from all the said number of articles when so received by said support means; and

(d) decoding means for decoding the encoded symbology images.

2. The encoded symbology scanner of claim 1, wherein:

(a) said support means includes transparent window means disposed to simultaneously receive a plurality of symbology encoded articles so that the encoded symbology may be disposed upon said window means and for illumination by said illumination means; and

(b) said imaging means includes CCD camera means disposed and lensed to simultaneously capture an image of all of the encoded symbology from the so received number of articles.

3. The encoded symbology scanner of claim 2, wherein:

(a) said imaging means includes a plurality of said CCD camera means simultaneously operated but with each said CCD camera means disposed to capture encoded symbology from only a portion of the so received number of articles;

(b) said decoding means functioning to decode the symbology for each of said portions and to assemble the so decoded symbology into a stream of decoded data.

4. The encoded symbology scanner of claim 3, wherein: there are four CCD camera means each disposed to capture a quarter of the encoded symbology.

5. The encoded symbology scanner of claim 4, wherein: the encoded symbology is different for each article with encoded symbology.

6. The encoded symbology scanner of claim 5, wherein: the articles to be encoded are test tubes or vials disposed in a predetermined array in a rack means.

7. An encoded symbology scanner for scanning the encoded symbology on a number of articles each of which carries encoded symbology, comprising:

- (a) a support for the scanner for receiving a number of articles upon which symbology has been encoded;
- (b) an illumination assembly disposed to simultaneously illuminate all of the encoded symbology carried by all articles that are so received by said support;
- (c) an imaging device disposed to simultaneously image all of the encoded symbology from all the said number of articles when so received by said support; and
- (d) a decoder for decoding the encoded symbology images.

8. The encoded symbology scanner of claim 7, wherein:

- (a) said support includes a transparent window disposed to simultaneously receive a plurality of symbology encoded articles so that the encoded symbology may be disposed upon said window and for illumination by said illumination assembly; and
- (b) said imaging device includes a CCD camera disposed and lensed to simultaneously capture an image of all of the encoded symbology from all of the so received number of articles.

. 9. The encoded symbology scanner of claim 8, wherein:

(a) said imaging device includes a plurality of said CCD cameras simultaneously operated but with each said CCD camera disposed to capture encoded symbology from only a portion of the so received number of articles;

(b) said decoder functioning to decode the symbology for each of said portions and to assemble the so decoded symbology into a stream of decoded data.

10. The encoded symbology scanner of claim 9, wherein: there are four CCD cameras each disposed to capture a quarter of the encoded symbology.

11. The encoded symbology scanner of claim 10, wherein: the encoded symbology is different for each article with encoded symbology.

12. The encoded symbology scanner of claim 11, wherein: the articles to be encoded are test tubes or vials disposed in a predetermined array in a rack.

13. A process for scanning encoded symbology from a number of articles upon which symbology has been encoded, comprising:

(a) positioning a plurality of articles upon which symbology has been encoded for simultaneous imaging;

- (b) simultaneously illuminating all of the encoded symbology for all of such articles;
- (c) simultaneously imaging all of the encoded symbology so positioned; and
- (d) decoding the encoded symbology images.

14. The symbology scanning process of claim 13, including:

- (a) providing and disposing a transparent window to simultaneously receive a plurality of symbology encoded articles; and
- (b) simultaneously imaging means all of the encoded symbology for the articles with a CCD camera disposed and lensed to simultaneously capture an image of all of the encoded symbology.

15. The symbology scanning process of claim 14, including:

- (a) employing a plurality of said CCD cameras to simultaneously image the encoded symbology but with each said CCD camera disposed to capture encoded symbology from only a portion of the articles;
- (b) decoding the symbology for each of said portions and assembling the so decoded symbology into a stream of decoded data.

16. The symbology scanning process of claim 15, wherein: there are four CCD cameras each disposed to capture encoded symbology from a quarter of the articles.

17. The symbology scanning process of claim 16, wherein: the encoded symbology is different for each article with encoded symbology.

18. The symbology process of claim 13, wherein: the articles to be encoded are test tubes or vials and are disposed in a predetermined array in a rack.

19. An encoded symbology scanner for scanning the encoded symbology on a number of articles each of which carries encoded symbology, comprising:

(a) support means for the symbology scanner for receiving a number of articles upon which symbology has been encoded;

(b) imaging means disposed to simultaneously image all of the encoded symbology from all the said number of articles when so received by said support means; and

(c) decoding means for decoding the encoded symbology images.

20. The encoded symbology scanner of claim 19, wherein: there are four CCD camera means each disposed to capture a quarter of the encoded symbology.

21. The encoded symbology scanner of claim 19, wherein: the articles to be encoded are test tubes or vials disposed in a predetermined array in a rack.

22. A process for scanning encoded symbology from a number of articles upon which symbology has been encoded, comprising:

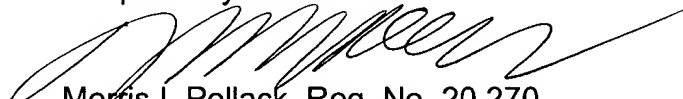
- (a) positioning a plurality of articles upon which symbology has been encoded for simultaneous imaging;
- (b) simultaneously imaging all of the encoded symbology for all of the plurality of articles so positioned; and
- (c) decoding the encoded symbology images.

23. The symbology scanning process of claim 22, wherein: there are four CCD cameras each disposed to capture encoded symbology from a quarter of the articles so positioned.

24. The symbology process of claim 22 wherein: the articles to be encoded are test tubes or vials and are disposed in a predetermined array in a rack.

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Respectfully submitted


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